

PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

Rec'd PCT/PTO 06 SEP 2004

To: Raybaud, Hélène Intellectual Property Law Dept Schlumberger Riboud Product Center 1, rue Henri Becquerel, BP 202 92142 Clamart FRANCE		Reçu le 06 SEP. 2004 SRPC - Clamart		PCT WRITTEN OPINION (PCT Rule 66)	
		Date of mailing (day/month/year)		03.09.2004	
Applicant's or agent's file reference WO 21.1075 — WL-FE		REPLY DUE within 3 month(s) from the above date of mailing			
International application No. PCT/EP 03/11173		International filing date (day/month/year) 06.10.2003		Priority date (day/month/year) 25.10.2002	
International Patent Classification (IPC) or both national classification and IPC E21B47/04					
Applicant SERVICES PETROLIERS SCHLUMBERGER					

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- This written opinion is the **second** drawn up by this International Preliminary Examining Authority.
- This opinion contains indications relating to the following items:
 - ☒ Basis of the opinion
 - ☐ Priority
 - ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
 - ☐ Lack of unity of invention
 - ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 - ☐ Certain documents cited
 - ☐ Certain defects in the international application
 - ☐ Certain observations on the international application
- The applicant is hereby **invited to reply** to this opinion.

When? See the time limit indicated above. The applicant may, before the expiration of that time limit, request this Authority to grant an extension, see Rule 66.2(d).

How? By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.

Also: For an additional opportunity to submit amendments, see Rule 66.4.
 For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4 bis.
 For an informal communication with the examiner, see Rule 66.6.

If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.
- The final date by which the international preliminary examination report must be established according to Rule 69.2 is: 25.02.2005

Name and mailing address of the international preliminary examining authority:



European Patent Office - P.B. 5818 Patentlaan 2
 NL-2280 HV Rijswijk - Pays Bas
 Tel. +31 70 340 - 2040 Tx: 31 651 epo nl
 Fax: +31 70 340 - 3016

Authorized Officer

Dantine, P

Formalities officer (incl. extension of time limits)
 Ter Haar, H
 Telephone No. +31 70 340-3817



I. Basis of the opinion

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed"*):

Description, Pages

1-18 as originally filed

Claims, Numbers

1-23 as originally filed

Drawings, Sheets

1/6-6/6 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
 - ☐ the language of publication of the international application (under Rule 48.3(b)).
 - ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).
3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:
- ☐ contained in the international application in written form.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority in written form.
 - ☐ furnished subsequently to this Authority in computer readable form.
 - ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
 - ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.
4. The amendments have resulted in the cancellation of:
- ☐ the description, pages:
 - ☐ the claims, Nos.:
 - ☐ the drawings, sheets:
5. ☐ This opinion has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

6. Additional observations, if necessary:

V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**1. Statement**

Novelty (N)	Claims	10
Inventive step (IS)	Claims	
Industrial applicability (IA)	Claims	

2. Citations and explanations**see separate sheet**

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Reference is made to the following document:

D1: FR-A-2 402 188 (ELECTRIC POWER RES INST) 30 March 1979

The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 10 is not new in the sense of Article 33(2) PCT.

The document D1 discloses (the references in parentheses applying to this document; see fig. 2&3; page 6 line 21 - page 8 line 13):

A device (21) for determining the position, in a formation (7) containing at least one electrolytic liquid, of an interface (5), comprising :

- a first excitation device (32) for stimulating, at a first instant, the interface with a first excitation signal (see fig. 3) corresponding to a first type of energy in such a way that said first excitation signal is converted at the level of the interface (5) into a first response signal (see fig. 2) corresponding to a second type of energy, one of the energies being a mechanical type of energy and the other an electromagnetic type of energy,
- a first detection device (50) for detecting the first response signal at a second instant,
- first means of calculation (fig. 4) for calculating the distance between the interface (5) and the first detection device (50) from the time separating the first instant and the second instant and knowing the propagation velocity of sound in the formation.

This device is perfectly suitable to be used in a borehole for locating an interface and therefore the subject-matter of claim 10 is not new (Article 33(2) PCT).

Note that due to the wording "if appropriate", the last paragraph of the claim can be ignored.